JUG

Publication of the Northern California Contest Club

NCCC

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*Guests are always welcome at the NCCC! Please join us.*

## Annual Awards Meeting

**Date**: Monday, March 14, 2011

**Time**: 6:00pm social hour; 7:00pm dinner, 7:45-9:00pm program

**Location**: Tied House, Tied House Brewery 954 Villa Street, Mountain View, CA 94041
URL: http://www.tiedhouse.com/
Dinner selections for this month's meeting are:

| | |
|---|---|
| Half Pound Burger | $20 |
| Voodoo Chicken Sandwich | $20 |
| Traditional Fish & Chips | $20 |
| Beer Mustard Chicken | $24 |
| Tortellini and Chicken | $24 |
| Pasta Primavera (veggie) | $20. |

Payment can be via the club's PayPal account (paypal@nccc.cc) or at the door.

Please RSVP to (k6rm@arrl.net) with your dinner choice for my "Headcount" list.

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### NCCC Officers

President: Jack Brindle, W6FB, jackbrindle@earthlink.net
VP/CC: Chris Tate, N6WM, ctate@ewnetinc.com
Sec/Treas.: Barry Pfeil, K6RM, barrypfeil@sbcglobal.net

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### FB's Message

By Jack Brindle, W6FB

Watson – The Automation of Jeopardy!

Recently IBM Corporation collaborated with the producers of the Jeopardy! TV game show to create a demonstration of man versus computer. In this case it was a rather impressive computer assembled by the IBM engineers.

The system consists of 10 racks containing a massively parallel computer based on IBM's Power 7 processors. Literally thousands of computing cores, terabytes of disk storage holding many

thousands of bits of knowledge and many thousands of lines of processor code were carefully crafted to compete with two mere humans. IBM had a lot to prove, and used the opportunity to push the technology envelope. The effort culminated in three half-hour Jeopardy! programs containing two full games. The first episode introduced us to Watson and included the first half of a normal Jeopardy! game. The second contained the "Double Jeopardy" and "Final Jeopardy" sections. The third episode contained a complete game.

Watson had a mechanical actuator to press the contestant's button to determine who was first and could respond with the question. The computer's answers were given with synthesized speech. I have seen no information indicating how answers were input to Watson. If Watson did use speech recognition for this, then it truly did move the state of the art forward.

So how did Watson do? He pretty well demolished the humans. There were times when Watson failed miserably (the worst was when he placed Toronto in the US), but in general the computer did quite well. Watson continually frustrated the humans by clicking the response button before they had a chance to do so. And Watson's answers were usually right. In the end, Watson (and IBM) were the big winners, outscoring the closest human (Ken Jennings) by a factor of three.

As I sat watching the shows, I couldn't help but see the parallels with our own hobby. There have been many efforts over the years to automate contesting, and we now see a computer as a necessary component of contest stations, as are other microcontroller-based devices. These episodes of Jeopardy! drew out other observations and feelings, though. The humans were very frustrated at Watson's ability to beat them to the button. It appeared that Watson would do a preliminary search for the information, give each answer a weight, hit the button, then finish the research. This is really no different from humans who typically hit the button, then think of the answer. It just did it so doggone fast. For me the show quickly went from seeing the great technology in play, to seeing how unfair the humans were being treated. This isn't just another contest category; it is a completely different contest.

As we move forward with ham contesting, we need to be careful how we allow the non-humans into the effort. As we have seen, contesting is for humans. We relish in the competition, going mano-a-mano. Computers and devices have their place in our hobby, but they are best as supporting roles, not the main contestants. While we argue as to what the devices should be allowed to do, it is clear that over time technology will move

forward to the point where it can not only recognize CW and digital modes, but voice as well. This will lead to pressures to allow this technology into further use. As long as all it does it to take load off the human operator, who still has to make the real decisions in the contest operation, then we may be able to live with it. But when the computers start making the big decisions and determining the strategy, then we need to draw the line. Contesting, after all, is for humans. Let's keep it that way.

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**VP/CC**
Chris Tate, N6WM

Greetings KB'ers

Well, it's been an interesting contest season so far! We have had some challenges and are anxiously awaiting the final results of our Sweepstakes competition. We are rapidly approaching our annual awards dinner, and another opportunity to recognize contest excellence in the club, but March brings us the first phase of our next group challenge: one that will be fun and exciting.

The ARRL sweepstakes is not the only contest series that the NCCC has historically pursued as part of our serious club competition. The Worked All Prefix (WPX) CW and SSB club competition have been seriously chased by the NCCC before, and this year we are taking up that challenge again.

Unlike Sweepstakes, we can have team members operating from DX locations that can yield many millions of points. Multi-Operator Multi-Transmitter efforts from "big gun" stations are encouraged. In fact, if you are the owner of one of these stations, don't forget to dip into the resource pool of the club. Make sure your stations are staffed with butts in chair on all transceivers at all times!

If you are not able to work with one of the larger stations, it is still very important to get on the air and contribute. As in other club competitions, the familiar drum beat of "every log, every point" will be once again critical in our success as a team.

Expect to hear more from me very soon on the reflector, as we start building momentum for our second "big one" of the year, beginning with the SSB version of this challenge.

Mark your calendars now with the following dates:

- WPX SSB: March 26 000Z through March 27 2359Z (Coming soon!)

- WPX CW: May 28 0000Z through May 29 2359Z

Make sure you take some time to visit the Website for this competition; it includes past results, articles, rules and more at http://www.cqwpx.com/

If you have unique skills that you think can benefit the team, please do not hesitate to offer them up. Propagation knowledge, antenna design/assistance, computer interfacing, etc.; all will be needed by many for us to produce the maximum possible score.

Leverage the reflector as much as possible, and if you need help, never hesitate to ask for it! This is the greatest contesting organization in the world, and with the right teamwork, is capable of amazing things. Let's get ready to take on the world this time and K some B!

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**Homebrewing Gadgets**
By: Jack Brindle, W6FB

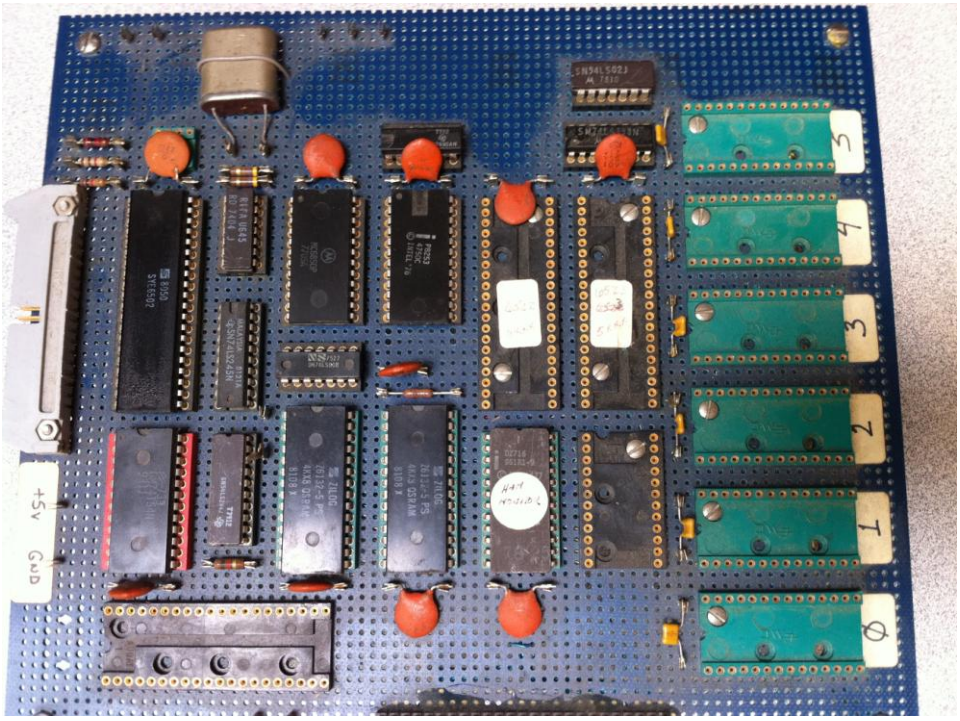
When it comes to do-it-yourself, hams have been in the forefront for a *very long* time. In the deep dark past we handcrafted our radios (now N6KR is the only one I know who does this, and he has a reason). Good-quality rigs became affordable in the 60s and 70s, reducing the need to homebrew these devices. The main thrust then moved to ancillary devices, such as amplifiers, tuners and control systems. Most hams still prefer to buy these devices, but many of us still prefer to build our own. We can then add features and options that are not found in commercial devices, simply because we can tailor these things to *our* needs.

Being somewhat of an atypical ham (also an engineer), I have long preferred to roll my own devices. I can't craft a radio better than N6KR or the other commercial designers, but I can do other things better. I also had the privilege of working at ARRL for some time, which really helped with my home-brewing skills. While there, I built several projects, but perhaps the most useful was a Gate-Dip Oscillator (QST, Jan, 1977, page 16).

This device allows the user to tune LC circuits such as antenna traps. It also works as a field strength meter. It was built almost completely from parts obtained at Radio Shack (the lone exception is the coil forms and socket). I layedd out and etched the circuit board myself (the proof is the "KQJ" on the original pcb – my Louisiana call was WB5KQJ). The entire project was built in just a few days, including calibrating the plug-in coils. It was a fun and very useful project.

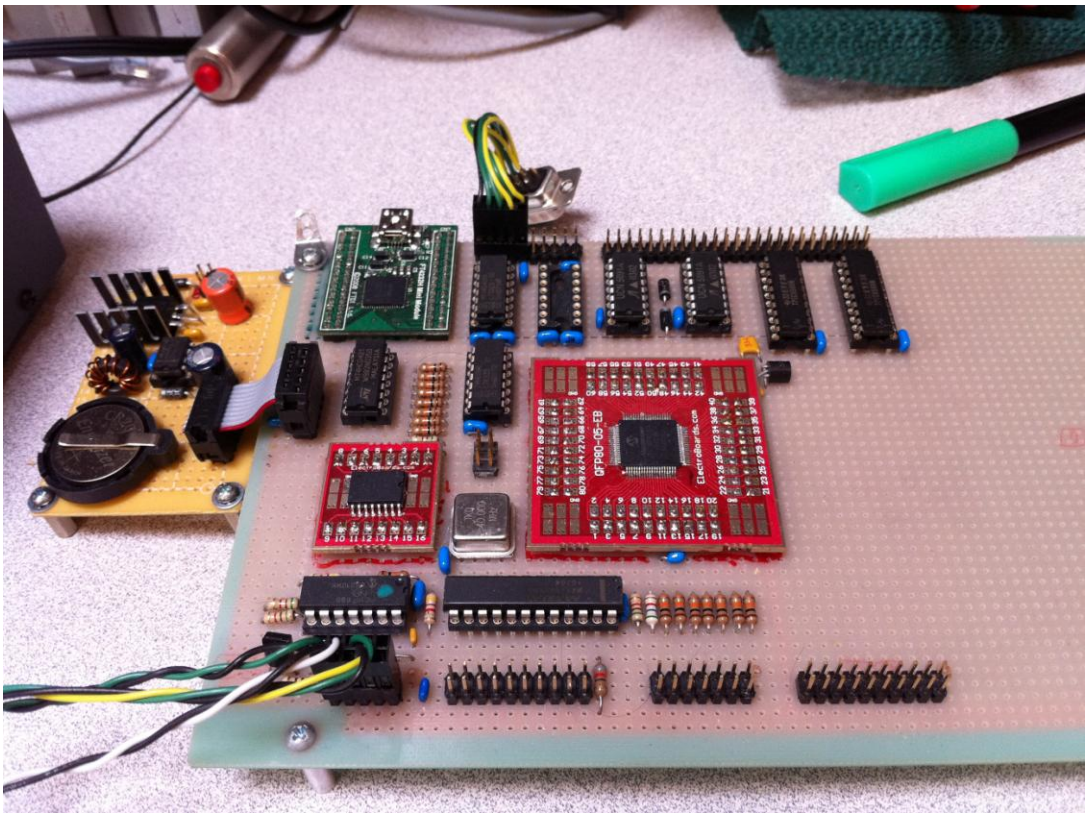
After being severely bitten by the microprocessor bug, my projects have tended to contain microcontrollers. These included an array of computers and station controllers. I made an early attempt at a dedicated contest computer in 1979. Shown below, this was a 6502-based system with on-board EEPROMs used as mass storage. Construction was wire-wrap on a 0.1” perforated board. I find hand wire-wrapping to be very therapeutic. Note the use of DIP (dual-inline package) ICs and other through-hole technologies. This

was before surface-mount devices made home brewing much more difficult. The system did work, but never saw a Sweepstakes competition.




I have upgraded my technology in recent years to use newer technology and methods so that I can make use of surface-mount components. These devices really require pc boards, but a cottage industry of prototyping boards and materials has made life much easier for us do-it-yourselfers.

A more recent project uses surface-mount microcontroller and other ICs, along with DIP components. This board still uses wire-wrap techniques, with the prototyping boards performing the task of adapting the new-world ICs to the old-world wire-wrap techniques. Perhaps the most interesting item is seen on the small power supply board to the left in the picture. The board contains a small DC to DC converter/regulator with its requisite inductor. The small ferrite toroid is itself hand-wound to provide the needed inductance. Why buy a part when you can make it yourself?



The intent of this series of articles is to get others interested in home brewing their own devices and gadgets for their ham shacks. Whether it be an antenna switch, station controller, or even the shelves the equipment sits on (see first photo), you really can create exactly what you need in the way of contest shack accessories. In doing so, you get to learn new things, and gain the satisfaction that you did it yourself. And, you create something that meets your needs!

The April NCCC meeting will provide a forum for station accessories and gadgets, whether home-built or commercial. These are devices that meet the needs of your station. Bring them for show-and-tell, and be ready to answer questions from those who need something solved and are just getting into creating these cool projects for themselves!

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